K-3 Numeracy/Literacy Report

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This document is intended primarily for:
System and school administrators
Teachers and support staff
School board trustees
Post-secondary institutions academic upgrading staff and administration
Alberta Education managers

And may be of interest to:
Individuals interested in school improvement and improving high school completion rates

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Executive Summary

In the summer of 2005, Alberta Education initiated a province-wide consultation pertaining to literacy and numeracy development in the early grades, reinforcing Alberta Education's commitment to ensuring that Alberta students have essential foundation skills for later success in learning, and to address the needs of the group of students not achieving the literacy and numeracy standards by Grade 3 that they would need to be successful throughout their schooling.

A stakeholder advisory committee including organizations that represent school boards, superintendents, principals, teachers and parents was formed to provide input and advice on the consultation (see Appendix 1), and to help develop background documents and a set of questions to be used in the consultation process. (See Appendix 2)

The stakeholder committee also provided advice on the consultation process, which included the sharing of information about the consultation with key stakeholder groups, and posting of the information on Alberta Education's website for individual and/or group response.

The consultations included meetings with groups of parents in five centres across the province and with parents of First Nations and Métis children. The parent meetings were conducted by facilitators from Alberta Community Development. Stakeholder organizations were also encouraged to conduct consultations and to make submissions. The consultation was supported by a research analysis by Alberta Education staff members. This report prepared by Alberta Education, represents a draft review and analysis of findings from the meetings, submissions, and the literature review.

The key themes that emerged from the process were:

- *Better program of diagnostic assessments and remediation are needed*
- *A variety of formative and diagnostic assessments are needed to help inform instructional strategies and decision-making premised on appropriate user supports*
- *Early intervention is key to success*
- *Better communication with all involved (including parents)*
- *More focus on numeracy and literacy in the early grades*
- *More support, resources and funding generally, but specific also to teacher training and professional development and smaller classes*
- *Better interagency co-ordination*

From these themes, eight recommendations were developed in collaboration with the advisory committee.

1. **That Alberta Education, with education stakeholders, research, develop and communicate working definitions of numeracy and literacy related to Alberta Education's Programs of Study.**

2. **That Alberta Education, with education stakeholders, develop and disseminate materials for teachers in defining and diagnosing developmental sequences linked to the Alberta Education curriculum, for Kindergarten to Grade 3.**

3. **That Alberta Education identify and subsidize diagnostic resources for numeracy and literacy in Kindergarten to Grade 3 that would inform instructional practice and program development responsive to child and student learning needs.**

4. **That Alberta Education develop pilot projects to deliver professional development on recommended literacy and numeracy diagnostic resources and interpretation thereof to support instructional practice.**

5. **That Alberta Education continue support for ACOL recommendation 1, to establish parenting centres in communities across the province with close links to elementary schools.**

6. **That Alberta Education fund, for populations deemed to be at risk, pre-Kindergarten and full-day Kindergarten programs with a focus on early literacy, early numeracy and parent involvement, consistent with the Goals of Education.**

7. **That Alberta Education extend AISI cycles from 3 to 4 years, with year 4 of each cycle being devoted to reviewing the results achieved in order to institutionalize and disseminate promising practices and to optimize planning for the next cycle.**

8. **That Alberta Education identify strategies for improving communications with parents regarding their child's learning.**

All recommendations with supporting comments and strategies are listed on page 18 of this document.

Purpose

In the summer of 2005, Alberta Education initiated a province-wide consultation pertaining to literacy and numeracy development in the early grades, reinforcing Alberta Education's commitment to ensuring that Alberta students have essential foundation skills for later success in learning, and to address the needs of the group of students not achieving the literacy and numeracy standards by Grade 3 that they would need to be successful throughout their schooling. The province-wide Kindergarten to Grade 3 (K-3) consultation with parents and stakeholders was undertaken to:

- Gather information to gain a better understanding of the education issues that impact early learning and assessment in literacy and numeracy
- Act on the information obtained to ensure all Albertan children are acquiring the literacy and numeracy skills needed for later life

Background

The Alberta Education News Release announcing the Grade 4 testing initiative provided some background information on the rationale of expanding provincial achievement tests to include Grade 4 students who do not achieve the acceptable standard on the Grade 3 provincial achievement tests.

> It is ... important that we have a way to follow up with students [who do not achieve the acceptable standard on the Grade 3 provincial achievement tests] to make sure their learning needs are being met. As it stands now, students don't write another provincial achievement test until Grade 6. We want to follow up with these students sooner than that to make sure they are succeeding. This new test will provide extra information for teachers and school administrators about students' achievement in reading, writing and basic mathematics, and about the success of their instructional programs. This initiative provides system-wide assessment, which can tell us what is working and what is not, and where the system can focus its efforts and resources.

In support of the focus on ensuring success for all Grade 3 students, the Curriculum and Learning and Teaching Resources branches administered "an all" call to publishers in June 2004 for learning and teaching resources to support early literacy, early numeracy, diagnostic assessments and integration across subject areas for Kindergarten to Grade 3. There were many submissions and resources authorized for literacy, but few for numeracy. An annotated list of authorized resources is available on the Alberta Education Website at: http://www.education.gov.ab.ca/k_12/curriculum/bySubject/kto3.pdf

In the summer of 2005, Alberta Education initiated a province-wide consultation pertaining to literacy and numeracy development in the early grades, reinforcing Alberta Education's commitment to ensuring that Alberta students have essential foundation skills for later success in learning. A stakeholder advisory committee including organizations that represent school boards, superintendents, principals, teachers and parents was formed to provide input and advice on the consultation (see Appendix 1), and to help develop background documents and a set of questions to be used in the consultation process. (See Appendix 2)

The stakeholder committee also provided advice on the consultation process, which included the sharing of information about the consultation with key stakeholder groups, and posting of the information on Alberta Education's web site for individual and/or group response.

The consultations included meetings with groups of parents in centres across the province (Grande Prairie, Edmonton, Red Deer, Calgary and Lethbridge) and with parents of First Nations and Métis children. The parent meetings were conducted by facilitators from Alberta Community Development. Stakeholder organizations were also encouraged to conduct consultations and to make submissions.

Additionally, the consultation was supported by a research analysis done by Alberta Education staff members. This report prepared by Alberta Education, represents a draft review and analysis of findings from the meetings, submissions, and the literature review. This document is intended to be reviewed by the Stakeholder Advisory Committee to help develop recommendations for submission, along with the summary report, to Alberta Education's Executive Team by March 2006.

Links to Other Alberta Education Projects/Initiatives

The results of this consultation project may have implications for, or be informed by other projects and initiatives of Alberta Education and the Alberta Child and Youth Initiative. Such projects may include, but are not limited to:

- The Alberta Commission on Learning
- The Accountability Pillar Initiative
- Literature Review of Assessment Strategies for Early Numeracy and Literacy
- The High School Completion Project
- The Speech Language Review
- The Provincial Approach to Student Information Initiative
- The Class Size Reduction Initiative
- The Student Achievement in Mathematics Project
- The Primary Programs Initiative
- The Management of Integrated Services for Children and Youth With Complex Needs and their Families: Guidelines for Alberta Regional Integrated Case Management Teams

Methodology

Based on input from the advisory committee, a set of five questions was developed to be used in consultation with parents and stakeholders pertaining to effective assessment practices in early literacy and numeracy. Face-to-face parent consultations were facilitated by a representative from Community Development in Lethbridge, Calgary (two meetings), Red Deer, Edmonton (two meetings) and Grande Prairie. Another session was completed in Edmonton with parents of First Nations and Métis children from around the province. These meetings were also attended by various representatives from Alberta Education, with the principal author of this document attending all sessions. Exact numbers of participants were not gathered by Community

Development, but an estimated 80-90 parents took part. This estimate is substantiated by the fact that the facilitator asked each parent to provide one response for question five, and overall 91 "key points" were gathered. The questions discussed in those sessions were:

1. In your view and experience, how do young children learn? (This question was initially design to stimulate discussion.)

2. In your view, what do you think are the most effective ways to ensure children are developing literacy (language skills) and numeracy (mathematics skills) in their early years at school? (This question was split into three separate questions during group discussions)

3. Describe what method you would use in order to know that what you are doing with a child is working. What would you be looking for? Once a child's learning has been assessed in some way, what can be done to help the child excel? (This questions was divided into two separate questions for group discussions)

4. What more do you think the school, the school jurisdiction, and the government could do to assist all children's learning? How could you help the school?

5. Of all the things that have been considered, what do you feel is most important? What are the key ideas?

As stated above, the facilitator divided question two in the parent discussion into three categories so that both numeracy and literacy were discussed together as well as separately. Likewise, two separate questions were extracted from question three to differentiate between how to best assess a child's learning and the follow-up activities (See table 1 page 7).

Qualitative analyses of the responses from the parent consultation sessions and from the submissions received were conducted by research staff from Alberta Education. In this, responses were codified and grouped according to theme where possible so that results could be aggregated and major themes more easily illuminated. Submissions from the larger stakeholder associations were likewise reviewed and the major themes for each question from each association were isolated where possible.

Out of respect for the participants, schools, jurisdictions and associations that took part in the consultation, and in order to ensure transparency in reporting, this report provides a brief encapsulation of what was heard from each of the following three main input sources:

1 – Input received from face-to-face parent consultations;
2 – Input received via submissions from individuals and groups;
3 – Input received from the larger stakeholder associations.

The information was synthesized so that recommendations could be developed in collaboration with the advisory committee, related to the overarching themes.

Limitations

The following limitations should be regarded when reviewing the information:

- The project timeline, running from June 2005 to January 2006, was quite short. In that time questionnaires were designed, consultations were done around the province, and responses were compiled. A preliminary report needed to be ready for the stakeholder advisory committee and an internal committee from Basic Learning in order to generate recommendations.

- Parents were chosen and asked to participate by the school principal. Although steps were taken to help ensure that the parents consulted were drawn from a wide range of differing views and experiences, Alberta Education cannot verify that was the case.

- Because this was a qualitative method employing open ended questions, a vast number of responses were recoded for each question. An attempt was made to code and group responses so that themes might emerge from the information. However; if a topic area was remarked upon more than once in a given response, it was not coded twice. Similarly, the facilitator at the consultation sessions did not re-capture themes that had already been expressed. As a result, the frequency tables produced in this report are not generally indicative of how many times the given responses were heard, but merely the count of recurring themes.

- The set of questions used was not necessarily consistent throughout user groups.

- Two different sets of questions were distributed to individual stakeholders asking for their responses. For the purpose of analysis, the two sets of questions were equated. In the event that a school, jurisdiction or individual answered both sets of questions, both were considered as one response and not double counted.

Responses to Consultation

What We Heard from Parents- An Overview

Table 1 lists the top five responses to each question with ranks and percentages. A full list of responses can be found in Appendix 3.

Table 1- Top Five Parent Responses (Based on Percentages) from Each Question

Ranks	How do young children learn	Most Effective way- Numeracy and literacy	Literacy	Numeracy	Method to know Child is Learning	Once assessed...	What more can be done	Key Points
1	Exposure/ Modeling (20.3%)	Involve Parents in Formative Assessment/ Communication (15.8%)	Focus on Basics (13.8%)	Hands on/ Manipulative Concrete Examples (29.4%)	Misc. Comment (23.0%)	Make resources/ Support available (22.1%)	Involve Parents/ Communicate with Parents (22.4%)	Involve Parents/ Communicate with Parents (17.6%)
2	Variety (18.0%)	More/Better Resources (14.9%)	Exposure/ Modeling (13.8%)	Focus on basic skill Development (8.8%)	Teacher Observation (9.5%)	Misc. Comment (20.8%)	More Resources/Funding (22.4%)	More Support/ Resources (15.4%)
3	Repetition/ Routine (10.9%)	Differentiated instruction (9.8%)	Involve Parents in Formative Assessment/ Communication (10.8%)	Repetition (8.8%)	Variety of Assessments (8.7%)	Course of follow-up action (18.2%)	Involve Community (6.0%)	Differentiated Instruction (9.9%)
4	Hands on (7.0%)	Smaller Classes (7.0%)	Early Assessment/ Intervention (9.2%)	No Calculators/ Computers (5.9%)	Involve Parents in Formative Assessment/ Communication (7.9%)	Involve/ Educate Parents in Options (14.3%	Acknowledgement of Differentiated Learning Styles (6.0%)	More Consistency between Schools/ Teachers (8.8%)
5	Hypothesis Testing (6.3%)	Make it Fun/Relevant (5.6%)	Formative Assessments (6.2%)	Involve Parents in Formative Assessment/ Communication (4.4%)	Formative Assessment (6.3%)	Confirm (6.5%)	Misc. Comment (6.0%) Smaller Classes (6.0%)	Smaller Classes (6.6%)
Total %	62.5% of 128	53.1% of 215	53.8% of 65	57.3% of 68	55.6% of 126	81.9% of 77	62.8 % (67.8) of 67	58.3% of 91

- In total, 837 responses were recorded from approximately 90 individuals.
- 83 responses (about 10%) related to more or enhanced resources (such things as French phonics books, librarians, teacher aids etc) were recorded.
- Supplemental input was recorded as separate items in each category and coded as "Miscellaneous comments". The largest number of miscellaneous comments recorded pertained to the questions regarding what method should be used to determine what the child is learning, and what to do once a child has been assessed. Comments here included such things as "parents should be compensated for getting help" and "equal funding for schools".

Key Findings from Parent Responses

The overall key themes organized by sub-theme heard from parents were as follows:

Instruction

- Instruction should be consistent with the child's learning style.
- A variety of methods should be used for assessing a student's learning needs as children have differing learning styles.
- Focus on basic skills in the early years (focusing the curriculum more on literacy and numeracy).

Assessment

- Use assessment formatively and involve parents in the learning process.
- Teacher-based diagnostic assessment used to inform instruction, communicated to parents, is a good strategy to ensure students are learning.

Communications/Involvement of Parents and others

- Better integration of community supports.
- Involve parents through better communication with parents to empower them to help their children.
- Take steps to ensure more consistency between schools/teachers.

Resources/Funding

- Better resources and information for parents should be available to help them help their children.
- Support in the form of resources/funding to help guide actions based on assessments.
- More/stronger resources to help parents and teachers follow through post-assessment.
- Smaller classes.

Submissions from Schools, Jurisdictions and Associations

Following is the thematic analysis based on individual and group submissions from school, jurisdictions and associations. Submissions were received from a variety of respondents including teachers, principals, board members, and entire boards. There were 26 responses from schools, 18 from jurisdictions, and four from other organizations such as libraries and adult or family literacy organizations. The responses for questions 1-3 fell into one of the following categories:

Learning/instruction/methodology - responses that reflected strategies/methods related to learning and teaching.

Resources/Funding - responses that reflected resources (human and others) to support learning at home and in the classroom or responses relating to funding issues for resources.

Affective Factors - responses related to the atmosphere of the home and classroom that support the development of a positive disposition to learn.

Assessment - responses pertaining to assessing or determining students learning outcomes.

Other - any other response that does not fit specifically under any of the above categories but was a consistent and popular response.

If a response was applicable to more than one category, it was counted in each that it applied to.

Table 2 – Coded Q1. Responses from Individuals and Groups

Question 1 How do young children learn?

Category	Number	Examples of responses (top responses)
Learning/instruction /methodology	139	Experience Repetition/routine Hands-on Modeling
Affective Factors	32	Healthy environment Interest/Internalization
Assessment	8	Self assessment Use authentic assessment
Involve Parents	7	Communicate
Other	7	Research Single grade classes

Table 3 – Coded Q2. Responses from Individuals and Groups

Question 2 What do you think are the most effective ways to ensure that children are developing numeracy and literacy skills?

Category	Number	Examples of responses (top responses)
Learning/instruction/methodology	173	Hands on/manipulatives Exposure to text/number Use a variety of approaches
Affective Factors	12	Emphasize literacy/numeracy rich environment Appropriate learning space/environment
Assessment	111	Use assessment results to inform teaching/provide instruction/intervention to help children improve Pre and post assessment Teacher observation/monitoring
Other	27	Involve parents/communicate Downsize curricular content Involve professional development Have adequate funding Provide resources to parents who need them Use parent volunteers

Table 4 – Coded Q3. Responses from Individuals and Groups

Question 3 Describe what method you would use in order to know that what you are doing with a child is working?

Category	Number	Examples of responses (top responses)
Diagnostic assessment	95	Need to focus on individual , know child's baseline, pre and post testing, chart individual progress, diagnostic, checklists, one on one, IPPs
Formative assessment	196	On going , observation, portfolios, checklists, talk to child, questioning, pre and post testing
Summative Assessments	55	Standardized , summative
Individual Student Assessments	157	Set goals/targets and modify based on assessment Determine weaknesses and abilities Portfolios
Classroom Assessments	57	Create a challenging environment/enrichment Testing (comprehension, criterion referenced, standardized)
Other	83	Support from other staff for teachers Classroom assistance, more time for teachers and PD

Table 5 – Coded Q4. Responses from Individuals and Groups

Question 4 What more do you think the schools, jurisdictions, government, and parents could do to assist all children's learning?

Category	Number	Examples of responses (top responses)
Schools	95	Provide more time for teachers/provide support Professional development Smaller classes Involve parents
Jurisdictions	131	More resources/funding Professional development Smaller classes More time for teachers/support More trained staff More equitable funding Full day Kindergarten
Government	24	More resources/funding Smaller classes Downsize curriculum Continue AISI

Table 6 – Coded Q5. Responses from Individuals and Groups

Question 5 Key Themes:	
Category	**Number**
More support for teachers (PD, training, aids)	43
More Resources Funding	28
Differentiated Instruction, recognize different learning styles or needs	22
Focus on the basics, limit curriculum	13
Smaller Classes	12
Involve parents, communicate with parents	10

Summary of Individual stakeholder responses

The overall themes that emerged from the individual stakeholder responses gathered via submissions were:

- Instruction should include a variety of strategies that meet the needs of the learner (emphasis on constructivist approach and differentiation)
- More resources (including staff), and more funding are needed
- Assessment of a child's learning should focus on formative or diagnostic information
- Teachers need support in the classroom with time, curriculum materials, and assistance
- Provision for professional development needs to be made for instruction (best practices) and assessment
- More time should be focused on numeracy and literacy (i.e better integration)
- Parents need to be more engaged in their child's learning
- Communication with parents is vital

What We Heard from Stakeholder Associations

Submissions were received from the Alberta Teachers' Association (ATA), the Alberta School Boards Association (ASBA), the Alberta Home and School Councils' Association (AHSCA), the Association of Independent Schools and Colleges in Alberta (AISCA), and the College of Alberta School Superintendents (CASS)[2]. The responses varied in length and format, and the wording to some of the questions was altered slightly. The main themes for each question, from each association (where possible) were recorded in Table 7. The responses from all associations were combined into a single response for each question, based on the themes that emerged.

[2] The submission from CASS was recommendations that resulted from their discussions pertaining to the K-3 Initiative at the CASS Issues Forum, November 2005. Because they were not broken down as responses to the individual questions, they were captured only under question 5 - Key ideas.